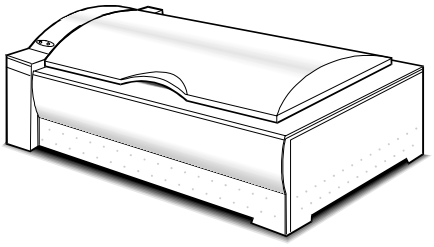

English

# PowerLook 3000

## *Color Scanner*

**Operation Manual**

**Thank you for purchasing the PowerLook 3000 color scanner.** With the PowerLook 3000 color scanner, you can easily scan A4 size documents and photographs into your computer and maintain them as electronic copies.

### *Main Features:*

- *High Resolution and Density Range:* With a resolution of up to 12192 dpi, it produces better gamma transformation, and a more accurate detection of highlight and shadow details, thereby allowing even distribution of colors.
- *Power Twin Lens:* PowerLook 3000 offers a dual-lens feature that enables users to choose between two optical resolutions: 1220x3048 dpi and 3048x3048 dpi. It is like having two scanners in one machine. The extended optical resolution is extremely helpful when scanning small images, such as 35mm slides.
- *Auto Focus:* When switching the lens or changing the scan mode (Reflective/Transmissive), the scanner will move the lens and the CCD for focusing the image automatically.
- *Intelligent Scanning Control Interface called MagicScan:* MagicScan provides a comprehensive range of scanning control functions. Completing the package are the bundled award-winning and proven software packages such as buniscan PhotoPerfect.
- *Built-in Transparency Adapter:* Allows the scanning of films, slides and transparencies up to the full-size scanning area: 8.5" x 11.7".
- *Proprietary Image Noise Reduction:* Your scanner uses a sealed optical system design that blocks dust particles and excess reflections from penetrating the optical unit, thereby overcoming image and optical noise and ensuring sharp, true-life images.

**System Requirements**: 486DX or higher (68030 processor or Power Macintosh for Mac users), CD-ROM drive, hard drive with 20MB free disk space, 4MB memory, Microsoft Windows 3.1 or 95 (Mac OS 7.0 or later for Mac users), Windows-compatible keyboard, display and mouse. Recommended: SVGA or higher graphics card.

Part No.: 830555-00 0997_egfscjc

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# Quick Start Guide

This section serves as a quick reference to the connection and installation procedures for the PowerLook 3000 scanner.

## *1. Unpacking your Scanner*

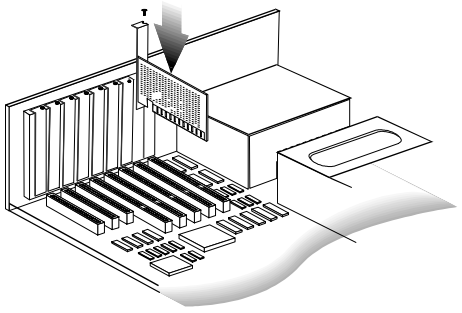
Unpack your scanner. Make sure that all the scanner system hardware, software, cabling and documentation items indicated on the packing list are present.

## *2. Connecting the Interface Card (for PC users only)*

a) Turn off your computer and remove the computer's housing cover.

b) Locate an available 16-bit slot.

c) Insert the SCSI card by pressing it gently but firmly into the slot. Make sure it is firmly seated in the slot.



d) Replace the computer's housing cover.

*Note*: **If you already have a SCSI card installed on your computer:**
When installing the software, you will be asked to choose TYPICAL or CUSTOM installation. Choose CUSTOM and select "Adaptec or other ASPI Compatible Interface Card" when installing the scanner driver. Otherwise, the scanner will not work properly.

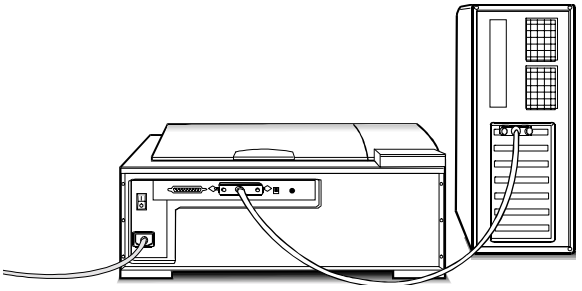
## *3. Connecting the SCSI Cable*

Connect the SCSI cable to the SCSI interface card and the other end of the SCSI cable to the scanner.

If your scanner is not chained to other SCSI devices or at the end of the SCSI chain, please connect the terminator to the remaining SCSI port of your scanner.

### *4. Connecting the Power*

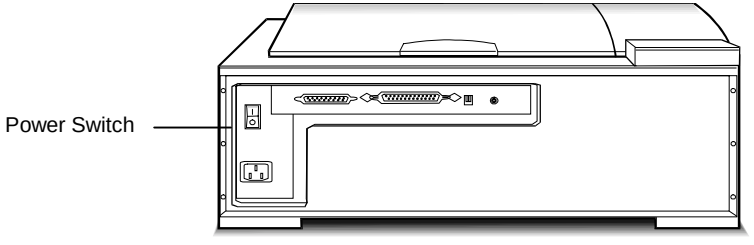
Connect the power cord to the scanner and plug the other end of the power cord into an available outlet (socket).



### *5. Powering Up*

a) Turn the scanner power switch on. When the Ready indicator is on, your scanner is ready to use.

b) Turn on your computer.




### *6. Software Installation*

We recommend that you install your image editing software first and then MagicScan.

a) Insert UMAX MagicScan CD into your CD-ROM drive.

b) **Win95 users** - click on the Start button and click on Run…

**Win3.1 users** - you can access Run… by clicking on the File menu in Program Manager and then click on Run.

In the Run dialog box, type d:\setup. If your CD-ROM drive is designated by another drive, please type the appropriate letter in the Run dialog box.

c) **Macintosh users** - Double-click on the MagicScan installer icon to start installation.

d) Follow the on-screen instructions to completely install MagicScan.

*Note:* After you finish installing the software, refer to the MagicScan Electronic Book for information on using MagicScan.

*Note:* If you want to scan transparencies, please use frame holders to obtain better scanning results. Please note, you don't need to use frame holders for scanning 35mm slides.

## *About this manual*

This manual is divided into chapters and appendices. The chapters give instructions on all aspects of installation, troubleshooting, and basic scanner maintenance. The appendices contain relevant technical information for your reference.

| | |
|---|---|
| *Chapter 1* | gives instructions and tips on scanner preparation, handling and routine scanner maintenance. |
| *Chapter 2* | gives instructions on scanner connection to a Macintosh computer and the corresponding software installation. |
| *Chapter 3* | gives instructions on scanner connection to an IBM PC compatible and the corresponding software installation. |
| *Chapter 4* | gives troubleshooting tips for possible problems with the scanner. |
| *Appendix A* | gives instructions for installing an ASPI-compatible interface card. |
| *Appendix B* | lists specifications for PowerLook 3000. |

A Glossary and an Index are also included for easy reference.

# Chapter 1: Getting Started

Your PowerLook 3000 scanner is extremely user-friendly. Hardware and software installation can be completed in a few steps. In minutes you can start operating your scanner and obtain impressive results.

This chapter tells you how to prepare your scanner for connection and installation. It also gives some handling precautions and general care measures to ensure that your scanner will stay in top condition at all times.

## *Before You Begin*

### Unpacking Your Scanner

Ensure that your package contains all the hardware, software, cabling and documentation you ordered. Check for any damage that may have occurred while the package was in transit. If there are any missing or damaged items in your scanner package, contact your dealer or the carrier of your package immediately.

### Static Electricity Precautions

Static electricity (in your body) can cause damage to the electronic components on the scanner's printed circuit board or the computer's interface card. Therefore, you need to discharge static build-up from your body before handling any card or component outside of its anti-static packaging.

To protect your equipment from static discharge, you are advised to closely follow these measures below:

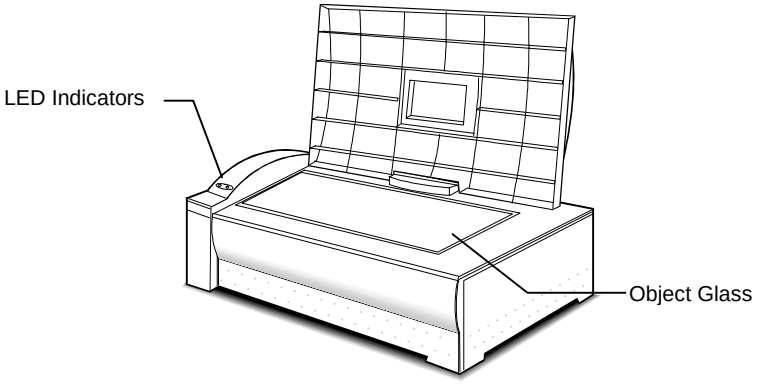
- Discharge any static build-up in your body by touching a grounded or anti-static surface (such as a large metal object or the silver-toned expansion slot covers at the rear of your computer.) Do this prior to removing any electronic components from their anti-static bags.
- When handling any electronic components, avoid touching any metal part of the component such as the gold “fingers” that plug into the expansion slot. It is best to handle system components either by their edges or by their mounting brackets.

## *A Glance at Your Scanner*

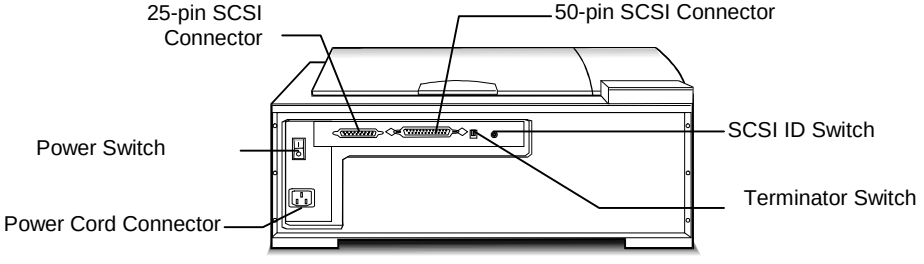
Take a few minutes to become familiar with the different parts of the scanner. The figure below shows the locations and names of the scanner parts. A brief description of each part is also given.

- **Object Glass -** The glass surface on which the document or image for scanning is placed; made of tempered glass with excellent optical qualities.
- **LED Indicators -** two indicators - Power and Ready.
- **Power Switch -** Switches power on and off.
- **SCSI ID Switch -** Sets the scanner's SCSI ID.
- **25/50-Pin SCSI Connector -** Insert the 25/50-pin SCSI cables here.
- **Power Cord Connector -** Insert the scanner power cord here.
- **Terminator Swtich -** Selects the proper terminator setting to ensure the scanner works properly.

### *Front View*




### *Rear View*



## *Preparing the Scanner*

Prepare your scanner for installation through the following simple steps:

- Check and reset (if necessary) the scanner's SCSI address
- Run the automatic scanner self-test

### Testing the Scanner

The scanner automatically performs a simple self-test each time it is turned on. This self-test checks the status of certain scanner devices.

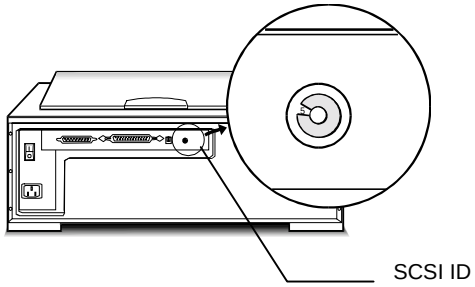
After unpacking, start the scanner self-test by following the steps below:

1. Connect the power cord to a wall outlet.
2. Connect the other end of the power cord to the scanner.
3. Turn on the power of the scanner.

At power-on, the front panel indicators flash once. The power indicator then glows and the ready indicator blinks. When the test is completed, the power and ready indicators glow steadily.

## Changing the SCSI ID Number

Your scanner's SCSI ID setting is factory preset at #5.




- Check to see if this ID setting is used by another device connected to your computer's SCSI port.
- If SCSI ID #5 is not used, you do not need to change your scanner's SCSI ID number. You can directly proceed to hardware connection and software installation. For installation instructions, proceed to Chapter 2 if you are connecting to a Macintosh computer or to Chapter 3 if you are connecting to an IBM PC.
- If you find however, that another connected device is already using SCSI ID #5, then you must reset the SCSI ID on your scanner.

To reset the SCSI ID, do the following:

1. Make sure the scanner power and the computer are off.
2. Check the SCSI addresses of your external SCSI devices and look for an unused ID number.
3. Gently turn the SCSI ID switch until the chosen number appears in the switch's notch. If there are no other external SCSI devices except the scanner, you do not need to change the factory preset address 5.

*Note*: Do not use SCSI ID settings from 7 through F on your scanner. They are for factory use only.

## *Care and Maintenance Tips*

Regularly clean the object glass of the scanner to prevent dirt or smudge build-up that may reduce the quality of your scanned images. Before you clean the object glass, make sure the scanner power is off and the power cord is unplugged.

Clean the object glass of the scanner with a soft damp cloth and a mild detergent or alcohol.

*Note*: Avoid spraying cleaning fluid directly on the object glass. This may cause the liquid to penetrate the seams around the glass and contaminate the mirrors and lenses inside the scanner. Spray the liquid on the cleaning cloth then wipe the glass clean.

Be sure that nothing covers the calibration area. It is important to keep the calibration area clean since dust or smudge marks on the glass will reduce the quality of scanned transparencies.

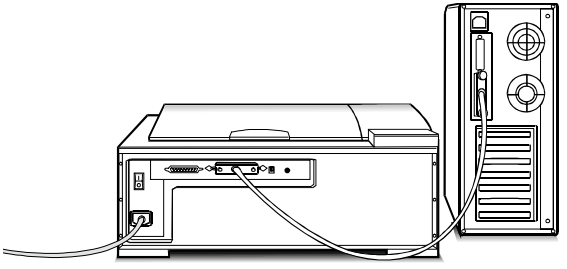
Do not leave transparencies on the object glass of the scanner for excessive periods of time. The warmth of the scanner lamps may cause them to deteriorate. Please, use the frame holders to secure the transparencies for scanning.

# Chapter 2: Macintosh Installation

This chapter describes how you can use your scanner with your Macintosh computer.

## *Connecting Scanner to your Computer*

1. Ensure that the scanner's SCSI ID is properly set. Refer to the "Change the SCSI Number" section in Chapter 1 for instructions on setting the scanner's SCSI ID.
2. Connect the SCSI cable to your Macintosh's SCSI port and connect the other end of the SCSI cable to the scanner.
3. Connect the power cord to the scanner. And connect the other end of the power cord to a grounded power socket.
4. Turn on the scanner power.
5. Turn on the computer power .



## *Installing the Software*

Install the software in the following order:

1. Image Application Software, e.g. binuscan PhotoPerfect, Adobe Photoshop.
2. Then, MagicScan.

MagicScan is the interface used by application software to control UMAX scanners. Its advanced controls allow precise adjustments in images even during the initial scan.

For detailed information on installing the software, refer to the Installation section of the Image Application Software User's Guide and MagicScan Electronic Books.

## *Scanning with Scan Frames*

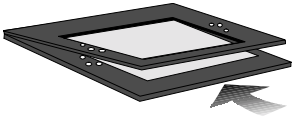
Scan Frames are for use with transparencies and negatives. Scan Frames are thin, hinged, rectangular-shaped plastic frames which can hold a source document of a slightly smaller size. The Scan Frames come in a number of sizes, including 120 mm and 4 x 5 inch. Orientation holes are located on the short sides of the frames. When one or more of these frames are placed on the scanner's object glass and the "Scan" button is clicked, the scanner will automatically detect the existence of each frame, using the orientation holes for reference, and will only include what is within each Scan Frame in the resulting scanned image.

To use the Scan Frames, do the following:

1. Select a Scan Frame size which will hold the original source document without covering up the orientation holes.

2. Select the "Frame Holder Detection" option from the MagicScan. For detailed information on using frame holders, refer to your MagicScan Electronic Book.

3. Open the Scan Frame and place the source document inside, taking care not to cover the orientation holes.



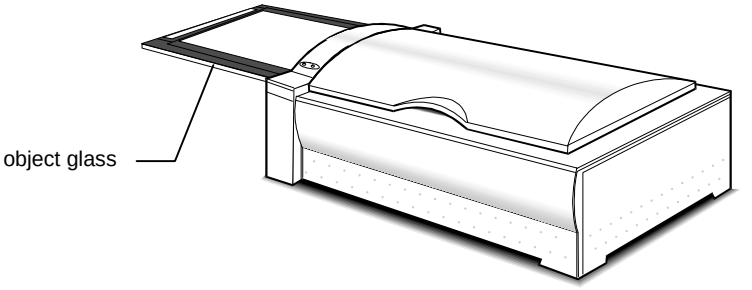
4. Lift up the Scanner's cover and place the Scan Frame on the scanner's object glass.

5. Carefully place the Scan Frame so that it's exactly parallel with one of the border of the scanner's object glass. You can easily do this by simply placing the Scan Frame against one of the borders.

*Note*: Although misalignment will not prevent the scanner from scanning, portions of the Scan Frame may appear in the resulting scan if the frame is not perfectly aligned.

## *Notice for Scanning Images*

PowerLook 3000 uses a special way to scan documents. Instead of moving the scanner light source back and forth to capture image data, the object glass of the scanner moves back and forth while the scanner light source remains fixed.




Please ensure that there is enough surrounding space for the object glass to move freely in and out of the scanner (more than 350x320mm).

Also, please note that the maximum thickness for the scanned document should be no more than 5mm. Otherwise, you may discover that jamming occurs.

# Chapter 3: PC Installation

This chapter describes how you can connect and use the PowerLook 3000scanner with your IBM PC or compatible computer.

## *Interface Card Installation*

Before you can use your scanner with your computer, you need to install the interface card into your PC. Please consult paragraphs “A” or “B” below to make the appropriate settings for your card.

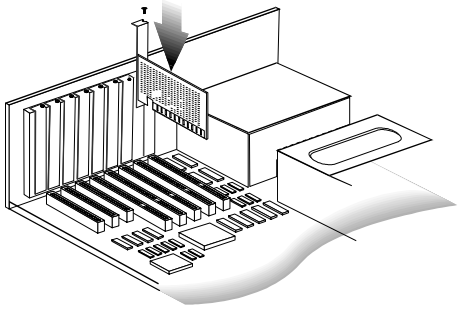
A. If your interface card is a UMAX proprietary card and has I/O Base Address dip switches on it, refer to the documentation that came with your interface card to confirm or reset the I/O base address.

B. If your interface card is a switchless card (i.e. does not have dip switches on it for selecting the I/O base address), install the interface card in the computer as described in the next section.

To install the card into one of the computer's expansion slots, observe the following procedures:

*Note*: The interface card is sensitive to static electricity. Handle the card by its mounting bracket, particularly when removing the card from its anti-static packaging.

1. Turn the computer power off and unplug the power cord.
2. Remove the housing cover of the computer. Follow the instructions provided in your PC’s reference manual.
3. Remove the metal cover corresponding to your chosen slot. Keep the removed screw so that it can be used to fasten the interface card.
4. Gently insert the interface card into the slot until it is firmly seated in the slot.



5. Secure the card in place with the screw removed from the expansion slot cover in step 3 above.

6. Replace the housing cover following the instructions provided in the computer's reference manual.

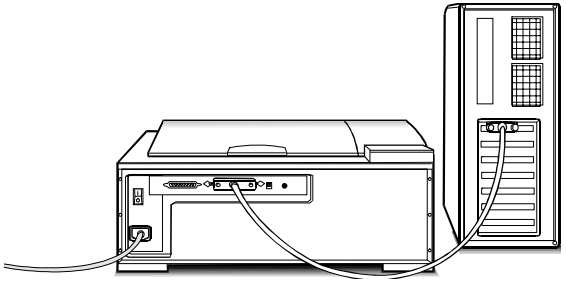
## *Connecting the Scanner to the Computer*

With settings on the scanner and card correctly set and the interface card properly installed in your computer, you can now connect the scanner and the computer, as follows:

1. Connect the 25-pin cable connector to the interface card in the PC.

   *Note*: If your SCSI card is not a UMAX brand, you have to use the other 50-pin port (50-50 pin) cable connector to connect to your interface card.

2. Connect the other end of the cable to the 50-pin connector of the scanner.
3. Connect the power cord to the scanner.
4. Turn on the scanner power.
5. Turn on the computer power.



Hardware installation is now completed.

Get ready to run the UMAX Setup program to install the supporting UMAX software supplied with your system.

## *Installing the Software*

Install the software in two easy steps, in the following order:

1. Image Application Software, e.g. binuscan PhotoPerfect, Adobe Photoshop.
2. Then, MagicScan.

MagicScan is the interface used by application software to control UMAX scanners. Its advanced controls allow precise adjustments to images even during the initial scan.

For detailed information on installing the image editing application software, refer to the Installation section of the Image Editing Application Software User's Guide.

1. Insert the UMAX MagicScan CD into your CD-ROM drive.
2. **Win95 users** - click on the Start button on the taskbar and select the Run command.

   **Win3.1 users** - choose the Run command from the File menu of Windows Program Manager.
3. In the Command Line of the Run dialog box, type d:\setup (if you are using CD-ROM drive D). If your CD-ROM drive is designated by another drive, please type the appropriate letter in the Run dialog box.
4. Follow the on-screen instructions to completely install MagicScan.

Double-click the Read Me icon in the MagicScan group for important up-to-date information that may not be included in the manual.

## *Scanning with Scan Frames*

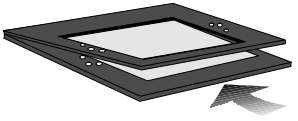
Scan Frames are for use with transparencies and negatives. Scan Frames are thin, hinged, rectangular-shaped plastic frames which can hold a source document of a slightly smaller size. The Scan Frames come in a number of sizes, including 120 mm and 4 x 5 inch. Orientation holes are located on the short sides of the frames. When one or more of these frames are placed on the scanner's object glass and the "Scan" button is clicked, the scanner will automatically detect the existence of each frame, using the orientation holes for reference, and will only include what is within each Scan Frame in the resulting scanned image.

To use the Scan Frames, do the following:

1. Select a Scan Frame size which will hold the original source document without covering up the orientation holes.

2. Select the "Frame Holder Detection" option from the MagicScan. For detailed information on using frame holders, refer to your MagicScan Electronic Book.

3. Open the Scan Frame and place the source document inside, taking care not to cover the orientation holes.



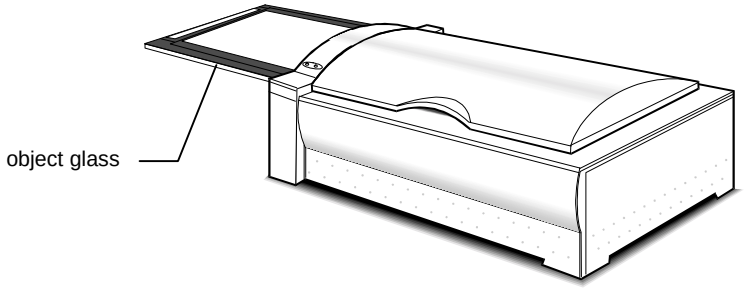
4. Lift up the Scanner's cover and place the Scan Frame on the scanner's object glass.

5. Carefully place the Scan Frame so that it's exactly parallel with one of the border of the scanner's object glass. You can easily do this by simply placing the Scan Frame against one of the borders.

*Note*: Although misalignment will not prevent the scanner from scanning, portions of the Scan Frame may appear in the resulting scan if the frame is not perfectly aligned.

## *Notice for Scanning Images*

PowerLook 3000 uses a special way to scan documents. Instead of moving the scanner light source back and forth to capture image data, the object glass of the scanner moves back and forth while the scanner light source remains fixed.




Please ensure that there is enough surrounding space for the object glass to move freely in and out of the scanner (more than 350x320mm).

Also, please note that the maximum thickness for the scanned document should be no more than 5mm. Otherwise, you may discover that jamming occurs.

# Chapter 4: Troubleshooting Tips

The PowerLook 3000 scanner was designed to provide a hassle-free installation and operation. However, should you encounter problems with your scanner, correct them by way of the troubleshooting tips given in this chapter.

For persistent problems with your computer, consult your dealer or approved service personnel.

## *General Approach*

In most cases, a problem does not call for the service of a qualified technician. The solution may be very simple, such as correcting cabling connections and the like. The solution of a problem normally lies at the source of the problem. Therefore, it is important that you ascertain the cause of the failure or malfunction. Below is a general troubleshooting approach.

1. Check the connections and installation. Ensure that there are no loose connections. Ensure that the settings on the scanner and/or the interface card are correct.

2. Check the error messages appearing on the screen. Does the message point to a hardware problem or software problem?

   If the problem is software-related, refer to the software reference manuals or on-line help. Most software manuals include a troubleshooting chapter.

   If the problem is hardware-related, verify that the cause is from your computer or scanner or in some cases, your network. If it is due to your computer malfunctioning, then consult your computer's reference manuals or a computer service technician.

   *Note*: Macintosh and IBM computers and compatibles display error messages that normally tell you the cause of the problem and in some cases tell you what to check or do to solve the problem.

1. If the error message points to a problem with your scanner system, run the scanner self-test.

   Turn the power of your scanner on. At power on, your scanner automatically runs the scanner self-test which can detect most of the problems with your scanner.

   Observe the behavior of the LED indicators. Record all your observations.

2. If all else fails, call your dealer.

   To facilitate servicing, supply your dealer with the following information:

   - Your host environment files such as your config.sys, autoexec.bat, win.ini, system.ini and other system files
   - Names and version of the application software you are using
   - Model and version of other SCSI devices you are using
   - TWAIN version
   - Names and versions of the drivers you are using
   - Model and version of your scanner hardware
   - Error codes or messages seen
   - Description of what you were doing at the time the malfunction or failure occurred
   - Description of what you did to attempt to solve the problem
   - Other observations that may aid the technician in identifying the problem and the solution

## *LED Indicators*

The tables below list some of the more common specific problems you may have with your scanner. Corrective actions are also given.

**Problem 1: Power Indicator fails to come on**

Possible Cause / Solution:

- Make sure the power cable is plugged into the scanner and the wall socket.
- Make sure that the power switch is on.
- If none of the above works, contact your dealer.

**Problem 2: Scanner lamp flickers, is dim, or fails to come on**

Possible Cause / Solution:

- The scanning lamp is failing or has failed and needs to be changed. Contact your dealer.

**Problem 3: If the Power and Ready indicators come on, but software returns "Scanner link failed" or similar message**

Possible Cause / Solution:

- Make sure the cable is connected properly.
- Verify the setting of the SCSI ID number. PC users should also pay special attention to the I/O address setting.
- Disconnect all SCSI devices and connect them one by one, beginning with the scanner, to identify the device causing the problem.
- Check the terminators and the cables. If problem persists, contact your dealer.

## *System Hang*

You may encounter a situation where the PC software installation appears to be stable and the scanner appears to be normal, but the system "hangs" whenever scanner operations are attempted. This problem is most often caused by another card in the system being set to the same address of your interface card. To solve the problem:

1. Remove all unnecessary interface cards from the PC.
2. If your interface card has I/O address setting dip switches on it, reset the switches to an unused number (not 300H).
3. Run Windows and your TWAIN-compliant imaging software.
4. Follow the instructions in the imaging software manual to start MagicScan.
5. After MagicScan starts, an initialization file will be automatically written to your hard disk. When MagicScan starts, exit MagicScan, the imaging application, and Windows.
6. Turn off the PC and re-install the other cards in your PC.
7. When you reboot and attempt to run MagicScan, it should come up normally.
8. If the above does not solve the problem, consult your dealer.

# Appendix A: Installing An ASPI-Compatible Card

If you are using an ASPI-compatible SCSI interface card with your computer and scanner, refer to the installation instructions provided with the interface card.

After installing the card, do the following steps before connecting your scanner to your computer.

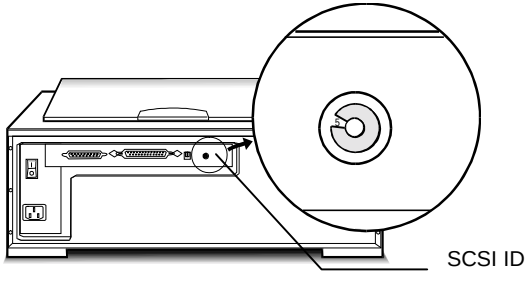
- Confirm or reset the SCSI address of the scanner.
- Check the terminators in the SCSI Chain
- Make the SCSI cable connections.

### Checking the SCSI Addresses

The illustration below shows the location of the SCSI address selector at the rear panel of the scanner. The selector shows the SCSI address setting of the scanner. In this case, it is #5 - the factory preset address.

After installing an ASPI-compatible SCSI interface card in your computer, proceed with the following:

1. Check the SCSI addresses of all devices on the SCSI chain. Is SCSI address #5 on the list of SCSI addresses in use?




2. If not, then you can connect your computer to the scanner with a factory preset SCSI ID of 5. You may jump to the section *Check the Terminators* in this appendix.

## Resetting the Address of the Scanner

If SCSI address #5 is in the list of SCSI addresses in use, then you must reset the SCSI address selector to another number:

1. Ensure the scanner power is off.
2. Choose any unused number in the range 0-6.

   *Note*: Do not use settings 7 to F on your scanner. They are for factory use only.
3. Reset the scanner's SCSI address to the number you have chosen.

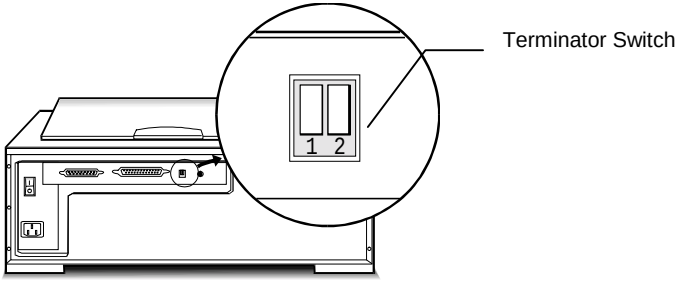
## Checking the Terminators

There should be two terminators in a SCSI chain: it is best to place the terminators at each end of the SCSI chain.

The simplest configurations for using the scanner with an ASPI compatible SCSI card are as follows:

- Connect the scanner to an ASPI compatible interface card that does not have another device attached to it.

  PowerLook 3000 has a built-in terminator switch for you to turn on and off (see the illustration). Number 1 represents "active" and number 2 represents "terminator power". In this situation, the card will have a built-in terminator. The card forms one end of the SCSI chain; the scanner forms the other end. Simply turn on the "active" and "terminator power" switch by pressing them down to enable the built-in active terminator function. These will ensure that there are two terminators and that they are placed at the ends of the SCSI chain.




- Connect the scanner to an ASPI card that has another device attached to it.

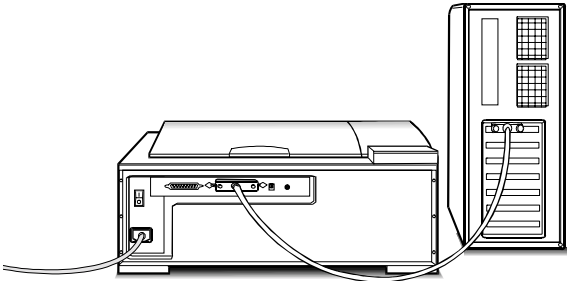
  In this case, check to see if the other SCSI device has a terminator. If not, turn on the terminator switch. If the other device has an internal terminator, simply attach the scanner to the SCSI chain. Although the terminators are not, technically speaking, placed at the ends of the chain, the scanner should work properly.

If you experience unreliable SCSI operation and suspect terminator problems, or would like a more thorough discussion of SCSI terminators and possible problems with SCSI terminators, please consult your dealer.

## Connecting the Computer and Scanner

Now that the interface card has been installed and all of the settings on the scanner and card are properly set, you can connect the computer and the scanner. Once this has been done, the hardware installation will be complete. To connect the scanner and computer, do the following:

1. Connect the SCSI cable to the interface card.
2. If your SCSI configuration requires the use of the terminator, turn on the terminator switch.
3. Connect the other end of the SCSI cable to the scanner.
4. Connect the power cord to the scanner.
5. Turn on the scanner power.
6. Turn on your computer power.



## Installing the Software for PC Users

Install software in two easy steps, in the following order:

1. Image Application Software.
2. MagicScan

MagicScan is the interface used by the application software to control UMAX scanners. Its advanced controls allow precise adjustments in images even during the initial scan.

For detailed information on installing the image editing application software, refer to the Installation section of the Image Editing Application Software User's Guide.

1. Insert UMAX MagicScan CD into your CD-ROM drive.

2. **Win95 users** - click on the Start button on the taskbar and select the Run command.

   **Win3.1 users** - choose the Run command from the File menu of Windows Program Manager.

3. In the Command Line of the Run dialog box, type d:\setup (if you are using CD-ROM drive D). If your CD-ROM drive is designated by another drive, please type the appropriate letter in the Run dialog box.

4. Follow the on-screen instructions to completely install MagicScan.

Double-click the ReadMe icon in the MagicScan group for important up-to-date information that may not be included in the manual.

# Appendix B: Scanner Specifications

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|---|---|
| **Scanner Type** | Moving Flatbed |
| **Interface** | Built-in SCSI II, 25-pin and 50-pin connectors |
| **Scan Speed** | 205 sec. (1220dpi) in color mode |
| | 514 sec. (3048dpi) in color mode |
| **Maximum Scannable Area** | Low power lens : 8.5” x 11.7” |
| | High power lens: 3.4” x 11.7” |
| **Optical Resolution** | 1220 x 3048 dpi / 3048 x 3048 dpi |
| **Output (H/W) Resolution** | 1220 x 3048 dpi / 3048 x 3048 dpi |
| **Maximum Resolution** | 12192 x 12192dpi |
| **Color Scanning Method** | One pass with color CCD |
| **Sample Depth** | |
| Color Mode | 24/36 bits/pixel |
| GrayScale Mode | 8/12 bits/pixel |
| Lineart mode | 1 bit per pixel |
| **Scanner Settings** | |
| Scaling | 1% to 1000%/400% in 1% increments at 1220/3048 dpi resolution |
| Highlight/Shadow | 256 steps |
| Contrast/Brightness | -100% ~ +100% |
| Gamma Curve | Downloadable Curves |
| **Data Output** | |
| Color Mode | 42 bits (hardware) /24 bits (system) |
| Grayscale Mode | 14 bits (hardware) /8 bits (system) |
| **Power Requirements** | |
| Voltage | 100 ~ 240 VAC |
| Frequency | 47-63Hz |
| Power Consumption | Maximum 60 Watts |
| **Environmental Range** | |
| Operating Temperature | 5°C ~ 400°C (50°F ~ 750°F) |
| Relative Humidity | 25% ~ 85% |
| **Other Specifications** | |
| Noise | Under 60 dB (Operating) |
| Dimensions | 548 mm x 425 mm x 219 mm |
| Net Weight | 18.5Kgs (40.7lbs) |
| Systems Supported | PC and Macintosh computers |

*Note*: Specifications are subject to change without prior notice.

# Glossary

| | |
|---|---|
| Apple Compatible Driver | An interface software module for applications other than Photoshop that support Apple scanners. |
| Application Software | Software that is used to perform a specific function, e.g., image processing, OCR (Optical Character Recognition), or DTP (Desktop Publishing). |
| ASPI | SCSI communication standard developed by Adaptec. |
| Black and White | A 1-bit image file capable of displaying only black and white image data with no intermediate gray levels. |
| DIP Switch | A small switch mounted in or on computer equipment that sets certain parameters. |
| Expansion Slot | A connector and bracket system in a computer into which an expansion or interface card can be inserted to add functions to a computer system. |
| Expansion Slot Cover | A metal or plastic plate dust cover that covers the exterior "hole" of an expansion slot. |
| Folder | The icon in Macintosh systems in which software icons can be placed. |
| Grayscale | An 8-bit image file capable of displaying up to 256 gray levels. |
| Halftone Pattern | The pattern that is used when varying the ratio of black and white pixels in a halftone image. |
| Halftone | A 1-bit image file capable of displaying gray levels by varying the ratio of black and white pixels within a given area. |
| I/O Base Address | An address that is used for communication between a host computer and an expansion or interface card. All cards in a computer system must be set to different I/O addresses. |
| Icon | The graphical representation of a computer file or piece of computer software. |
| Indicator Panel | The area of the scanner that holds and displays the LED indicators. |
| Interface Card | A card that provides additional functions or capabilities for your computer. These cards are called by various names such as adapter, add-in card, controller card, expansion card, option card or by the names of the functions they do such as fax/modem cards, network card, scanner card, etc. This card is inserted into an expansion slot to allow the connection of a peripheral device to a PC. |
| Non-TWAIN Driver | An interface system that does not follow the TWAIN standard and is designed for a specific software package and a specific image input device. |

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|---|---|
| Object Glass | The tempered glass of the scanner where documents or object to be scanned are placed. |
| Optical Assembly | The component system of the scanner that contains all the scanner's optical components. Sometimes referred to as a carriage or carriage assembly. |
| Peripheral Device | A device attached to a computer that adds functions to a computer system. |
| Power Indicator | The indicator that glows when the scanner's power cable is connected to the scanner and "live" outlet and the power switch is turned on. |
| Ready Indicator | The indicator that glows when the scanner is ready to be used. |
| SCSI Chain | One or more SCSI devices connected to the same SCSI controller. |
| SCSI Device | A device that uses the SCSI interface to connect to a computer. |
| SCSI ID | A unique number between 0 and 7 that identifies each device in a SCSI chain. The SCSI ID is set using a SCSI ID switch found on most external SCSI devices. |
| SCSI ID Switch | The switch on most external SCSI devices which is used to set the SCSI ID. |
| Terminator | An electronic component that absorbs stray signals in a chain of computer equipment to ensure reliable operation. |
| TWAIN | A standardized interfacing system that allows many different software applications to access many different image input devices. |
| TWAIN Compliant | Any software or image input device that conforms to the TWAIN standard. |